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ABSTRACT

Leadership development is needed in vocational education; the field lacks an adequate number of leaders and is making almost no systematic effort to develop them. In order for leadership development activities to be undertaken, however, a definition of leadership is needed. An overview of the literature suggests that leadership can be seen as both a process and a property, and the leader's role can be seen to be the accomplishment of four broad tasks: to inspire a shared vision, to foster collaboration and ownership, to exercise power effectively and enable others to act, and to set the right external context for the organization. This conceptualization of leadership also advances the proposition that leadership behaviors result from the interaction of the leader's attributes, the group's attributes, the task at hand, and the general context. Desirable leadership attributes predispose leadership behaviors. However, some leadership attributes can be developed through deliberate educational interventions, especially through professional development. A study by the National Center for Research in Vocational Education at Minnesota's 34 technical colleges validated this concept of leadership through a survey of 510 vocational-technical institute faculty (with 282 responses). Results pointed to the need for more studies to promote confidence in these findings. At the same time, the Center must also begin to provide leadership development services to the field of vocational education. (Includes 61 references and 5 appendices detailing survey results.) (KC)

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LEADERSHIP, LEADERSHIP DEVELOPMENT, AND THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION

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INTRODUCTION

A great deal of research about leaders and leadership has been conducted during the past four decades. A current review of the literature identified literally thousands of publications about the subject, including a number of recent books (Bass, 1985; Bennis, 1989a, 1989b; Bennis & Nanus, 1985; Cleveland, 1985b; Conger, 1989; Conger & Kanungo, 1988; Hunt, Baliga, Dachler, & Schriesheim, 1988; Kotter, 1987; Kouzes & Posner, 1987; Peters & Austin, 1985; Schein, 1985; Tichy & Devanna, 1986). The literature reveals that the dominant theory of leadership has been changing over the years, from an early search for universal leader traits, to categories of behaviors (such as task-oriented behaviors and human relations behaviors), to a view of leadership as contingencies or transactions, and now, to a focus on what Burns (1978) and Bass (1985) have called the transformational behaviors of leaders.

Despite this attention, it seems fair to say that, as yet, there is no consensus in the field on a specific definition of leadership, an explanatory model of leadership behaviors, or the most useful means for measuring leadership effectiveness. There is, however, substantial agreement that leadership is a viable construct and that it can be recognized in practice, that aspects of leadership behavior can be measured and shown to be related to effective performance, and that educational interventions can effect the behavior of leaders. Summing up the progress made in the study of leadership since World War II, Kenneth Clark (1988) puts it this way:

> We may not have given the world a comprehensive theory of leadership, complete with knowledge about how to increase the quality and number of leaders in future generations, but we have learned an enormous amount about the importance of certain qualities, about the effect of certain corporate or societal policies, and about ways in which persons with selected talents can be identified. (p. 1)

The National Center for Research in Vocational Education (the Center) is required by federal law to provide leadership development services to vocational educators. The law, however, offers no clues about the way in which the requirement is to be satisfied. For that reason, the purpose of this paper is to provide a conceptualization of leadership and leadership development that will be maximally useful to the Center in planning its leadership-development activities and in guiding research designed to support those activities. Given the lack of agreement on a comprehensive theory of leadership, the

conceptualization will consist of a synthesis of ideas that best serve the needs of the Center and that are consistent with the results of empirical research.

This paper will argue briefly for increasing the number and quality of leaders in vocational education. Then, it will present the conceptualization by (1) defining what the Center means by leadership; (2) suggesting how leadership behaviors emerge; (3) proposing some of the characteristics, knowledge, and skills of individuals that predispose leadership behaviors; and (4) indicating how those behaviors can be developed. The paper will then report the results of a study designed to begin to test the conceptualization, and close with implications for the Center's next steps.

THE NEED FOR LEADERS IN VOCATIONAL EDUCATION

> There may be a better system
> than the one we now have.
> But, whatever it is,
> if the people to lead it well are not there,
> a better system will not produce a better society.
> —Robert K. Greenleaf
> Or, better vocational education.

Leadership becomes especially critical to organizations in unstable situations—situations in which change in the environment makes the familiar ways of conducting the affairs of an organization unsatisfactory or irrelevant. In such situations, persons are needed who can point to new directions and who can influence others to believe and to follow. It is the quality of leadership that ultimately determines which organizations prosper and which fail (Bennis, 1984).

Vocational education is currently faced with a series of changes that are rapidly and significantly altering the educational and economic environment in which it exists—changes in the nature of work, changes in the ethnic/cultural composition of the student body, and increasing public demands upon the education system. Vocational education is also being challenged, as never before in its history, to justify its place in an education system that is being called upon to provide more basic skills training, more preparation in critical thinking capacities, more science and mathematics, and a higher level of sophistication in academic

subjects. Given these challenges, vocational education must begin its own transformation if it is to remain a strong form of education in the new environment.

In recognition of the need for the transformation of vocational education, the Center has declared as its central purpose the strengthening of the vocational function of education, "to help vocational programs respond positively to the charges levied against them, to help them adjust to the rapid shifts in the environment over which they have no control, and to anticipate future changes so that vocational education can shape debates over the role of education rather than merely react to them" (University of California at Berkeley et. al, 1987, p. iv).

Now, as much as in any previous era, vocational education needs leaders. Both adjusting to change and shaping the debate in education demand strong leadership. The former president of the American Vocational Association agrees:

> Like business and industry, vocational education is engaged in a struggle to adapt to change—a struggle to survive. Simply to remain a viable part of American education, we need astute, creative leaders at all levels—leaders for the ongoing work of delivering vocational education to the youth and adults of this nation, and leaders for our professional associations. (Edmunds, 1988, p. 24)

Unfortunately, the persons throughout the country who were consulted during the initial planning for the Center and those who have since been interviewed specifically for the purpose of exploring strategies for leadership development unanimously believe that vocational education does not now have the number of leaders that are urgently needed, nor is the effort necessary to develop them being made. The National Association of State Directors of Vocational Education, the University Council for Vocational Education, and the leadership of the American Vocational Association are in complete accord on these points. All thirty-four secondary and postsecondary vocational administrators interviewed in Minnesota during the last quarter of 1986 expressed a desire to improve their leadership capacities, as distinguished from their specialized administrative/managerial competencies (Moss, 1987).

Certainly, vocational educators have available to them many continuing education opportunities and advanced graduate programs. But these programs, with very few exceptions, are designed to prepare or improve specialists; that is, they prepare specialists

for agricultural education, business education, and so on, often with functional subspecialties such as teacher education, research, adult learning, or special needs students. The focus of these programs is on the technical/occupational knowledge and skills required to perform competently in a specific professional role. Even programs called "leadership development," like those that were conducted under the Education Professions Development Act, were designed to prepare better specialists for vocational education. Nevertheless, the indispensable quality of leadership is breadth. The attack on the problems of vocational education has to be led by generalists in the field, integrators who can rise above the boundaries of professional role specialization. For, as Harlan Cleveland so aptly put it, "It is generalists for better or worse, who box the compass, chart the course, and say where we shall go together, and when and why" (1985b, p. xvii). Thus, although the ladder to professional advancement is usually climbed on the rungs of specialization, too many persons attain positions of authority without having properly learned the generalist leadership role, and too many individuals who might have become excellent leaders with some help during the climb have fallen off the ladder.

The ultimate task of educators is the development of human potential, that is, the empowerment of people. Present leaders in vocational education have a particular responsibility for grooming the next generation. The final test of leaders is that they leave behind them those with the will and the ability to carry on. In the last analysis, vocational education's best asset and its insurance for the future is an adequate number of highly motivated, able leaders with a sense of mission to improve the field and the skills to accomplish it.

A CONCEPT OF LEADERSHIP

The Definition

From the perspective of the Center, leadership may be thought of

> . . . as both a process and a property. The *process* of leadership is the use of noncoercive influence to direct and coordinate the activities of the members of an organized group toward the accomplishment of group objectives. As a *property*, leadership is a set of qualities or characteristics attributed to those who are perceived to successfully employ such characteristics. (Jago, 1982, p. 315)

Leadership, according to the above definition, is the *process* of perceiving when change is needed and influencing the group by such noncoercive means as persuasion and example in its efforts toward goal setting and goal achievement.

The *property* of leadership is ascribed to an individual by members of the group when they perceive the individual to possess certain qualities or characteristics. Followers allow others to lead when those others match followers' ideas about what good leaders should be (Lord, DeVader, & Alliger, 1986). Since leadership as a property lies in the eye of the beholder, only those who are so perceived are leaders. Individuals who are seen as leaders enjoy the power of influence. That power, voluntarily conferred, enables leaders to ensure the outcomes they want and to prevent those they do not want (Gardner, 1986b). By contrast, individuals appointed to supervisory positions within organizations (e.g., head, administrator) have the power of authority as a result of holding their positions. However, although supervisors can be given subordinates, they cannot be given followers. They must earn followers by displaying the qualities or characteristics their subordinates ascribe to leadership.

It follows, then, that any individual in the vocational education community—teacher, counselor, or administrator—can demonstrate behaviors consistent with the process of leadership and be considered a leader by the rest of the group. While administrative positions in organizations may offer more opportunities to demonstrate leadership than some other positions, the position itself does not automatically confer leadership upon the holder.

Leadership and followership are linked concepts. Neither can exist, or be understood, without the other. Increasingly, they share responsibility for the success or failure of their enterprise (Heller & VanTil, 1982). Before the "information age," when very few members of the organization were informed, the organization could be structured hierarchically and management could be authority-oriented. Leadership as noncoercive influence mattered little. However, as more and more members of the organization become informed, they will demand an increasing voice in the affairs of the organization. Without a voice they will balk at authority and will find ways to subvert group action. Leadership, through consultation, persuasion, and inspiration, will be required to achieve maximum group productivity (Cleveland, 1985a; Gardner, 1986a; Kanter, 1981).

The Tasks

The process of leadership may be further elaborated and the concept of leadership better understood by describing the broad tasks that comprise the leader's expected role in organizations. The following four broad tasks have been synthesized from several sources (Bass, 1981; Gardner, 1987c; Posner & Kouzes, 1988; Yukl & Van Fleet, 1982). They describe what people in organizations should accomplish when they behave as leaders.

1. Envision and instill goals and set high ethical standards that reaffirm shared basic values and that maintain the organization's viability in a changing context. In other words, leaders inspire a shared vision, which helps the organization achieve its next stage of development.
2. Achieve a workable unity among personnel and motivate them toward achievement of organizational goals. In other words, leaders foster collaboration and ownership and recognize individual and team contributions.
3. Plan and manage change efficiently and nurture the strengths of followers to facilitate goal directed efforts. In other words, leaders exercise power effectively and enable others to act.
4. Serve as a symbol of the group and influence constituents beyond the group to achieve mutually workable arrangements. In other words, leaders act on the environment to set the right context for the organization.

Leadership Behaviors and Leader Attributes

The Relationship Between Leader and Group Behaviors

Figure 1 depicts an hypothesized relationship between the leader's and the group's behaviors. The relationship implies that the specific behaviors of leaders, as they attempt to accomplish the four broad tasks of leadership in organizations, are very situational. That is, the leaders' specific behaviors are determined by their attributes—the characteristics, knowledge, and skills which Jago calls qualities—interacting with their perception of group attributes (including culture), the particular tasks at hand, and the general context. To illustrate, the expectation of a group of soldiers in wartime about acceptable leader behavior differs from the expectation of professors in a college setting. The differences in the nature and complexity of tasks among positions at different levels in an organization are great. These differences affect the mix of leader attributes needed and the specific behaviors required (Jacobs & Jaques, 1988). When a group feels under attack from without, that contextual circumstance will cause many of the leader's behaviors to be different from circumstances in which the group believes it is secure.

The leader behaviors that result from the interaction of leader attributes, group attributes, the task at hand, and the general context influence group behavior. Group members filter the leader's behavior through their own perceptions of the context, the task at hand, and the leader's attributes, and then behave within the constraints of their own attributes. The meaning systems of the leader and the group, therefore, must correspond or the intent of the leader's behavior will be misunderstood (Kegan & Lahey, 1984).

The model shown in Figure 1 has two symmetrical feedback loops. First, the leader may adjust his or her behavior in mid-course as the result of immediate group reaction or may adjust perceptions of his/her own attributes or the group's attributes or both as the result of group behavior. Second, members of the group may adjust their behavior in midcourse as a result of leader reaction, or may adjust their perceptions of the leader's or their own attributes or both as the result of their assessment of the leader's behavior.

One implication of the model is that a criterion of leadership is the group's perception of the extent to which an individual's noncoercive behaviors contribute to accomplishing the four broad leadership tasks (enumerated in the previous section). A second implication of the model is that the leader may be influenced by the group, and vice

versa, thereby making leadership a dependent as well as an independent variable (Hollander & Offermann, 1988).

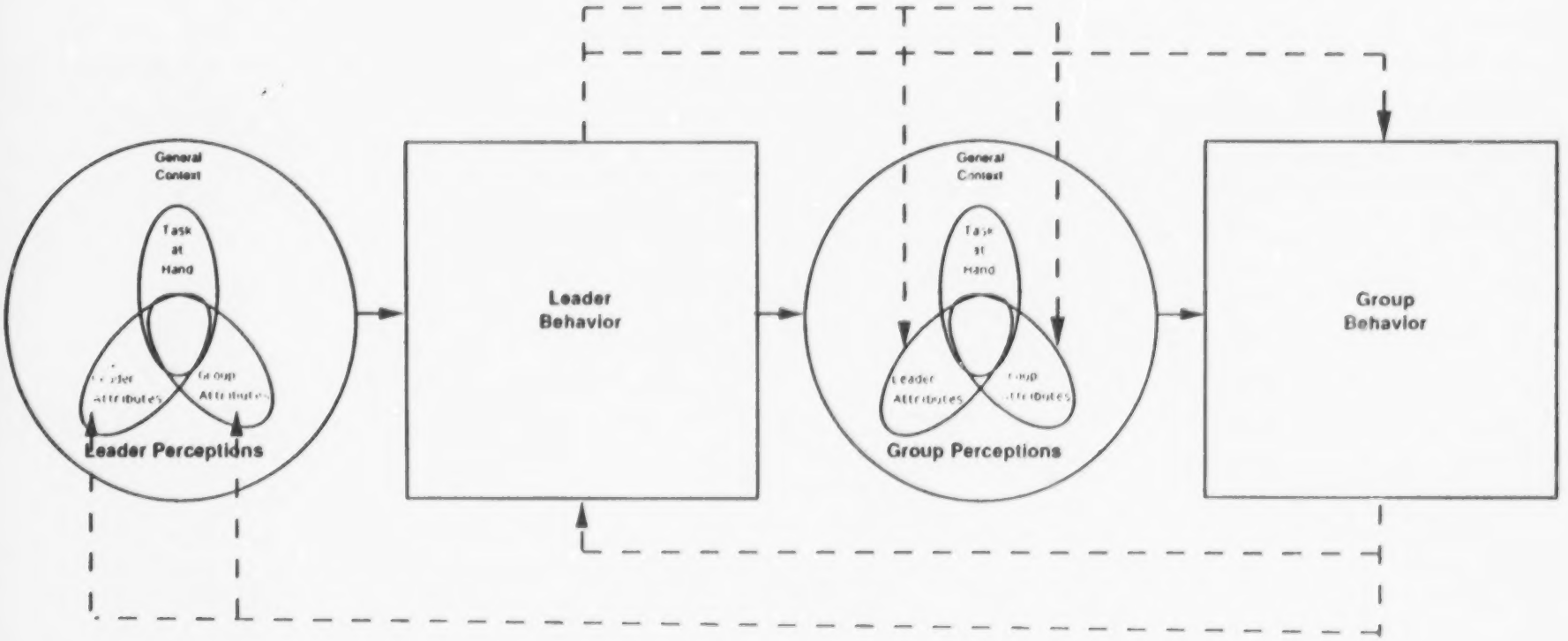
Leadership Behaviors

Several classification systems have been created for categorizing the desirable behaviors of leaders—behaviors that contribute to the accomplishment of the four broad leadership tasks. One system classifies behaviors into the categories of initiating either structure or consideration. Initiating structure consists of task-oriented behaviors such as goal setting, giving directions, and providing materials. Initiating consideration consists of human relations behaviors such as cooperating with co-workers and providing psychological support. Research has shown that the most effective leaders exhibit behaviors in both categories, with the balance influenced by the nature of the group, the task, and the context.

More recently, behaviors have been categorized either as transactional or transformational. Transactional behaviors are those in which the leader and follower agree upon performance goals, means toward achieving the goals, and a set of incentives to motivate goal attainment. Transactional leaders give something in exchange for what they want, they direct energy, tend to live within the organizational culture, and hold followers in a dependent position. By contrast, transformational leadership behaviors inspire followers to extraordinary efforts toward achieving transcendental organizational objectives. Transformational leaders synergize the energy of followers, alter the culture, and put themselves and their followers in an interdependent relationship. Researchers agree that both transactional and transformational behaviors are needed to accomplish the four broad tasks of leadership. It has been shown, however, that leaders who exhibit greater amounts of transformational behaviors have a more positive impact on such criteria as team performance, subordinate's evaluation of effectiveness, satisfaction with leaders, and supervisor's ratings of leader performance (Avolio & Bass, 1988; Bass, 1987; Clover, 1988; Hater & Bass, 1987; Mueller, 1980; Yammarino & Bass, 1988).

Figure 1

Relationship Between the Leader's and the Group's Behaviors



Leader Attributes

While it is a leader's behaviors that influence group performance, it is a leader's attributes that shape those behaviors. Within the constraints of a given situation, attributes, acting as predispositions, disinhibitors, and abilities, predispose individuals to behave in consistent ways. Attributes remain constant across situations to influence behavior in a wide array of tasks, groups, and contexts (Lord, DeVader, & Alliger, 1986). For example, attributes determine the tendency of an individual to use transactional or transformational behaviors (Brown & Hosking, 1986; Kuhnert & Lewis, 1987). The greater the latitude provided by the situation, the more likely it is that attributes will shape behavior. Bass (1981) sums up this way:

> Strong evidence has been found supporting the view that leadership is transferable from one situation to another. Although the nature of task demands may limit transferability, there is a tendency for the leader in one group to emerge in this capacity in other groups. (p. 596)

Many researchers have linked attributes directly with an array of leadership criteria in a wide variety of situations. For instance, the kind and the amount of certain attributes an individual possesses have been shown to be consistently and significantly related to such measures as rated managerial performance and advancement in business and education and the emergence and succession rate of leaders (Arter, 1988; Behling & Champion, 1984; Hogan, Raskin & Fazzini, 1988; Hollander & Offermann, 1988; House, 1988; Sashkin & Burke, 1988; Yukl, 1981). Earlier reviews of the literature—for example, Stogdill (1948)—are often thought to have revealed that there are no relationships between intelligence, personality factors, and leadership. More recently, Lord, DeVader, and Alliger (1986) have used current meta-analysis methods to show that, to the contrary, there are significant and consistent relationships between personality factors and intelligence and the emergence of leadership.

Thus, it can be presumed that there are some attributes, which, if possessed in adequate amounts, will increase the likelihood that desirable leadership behaviors will occur in a wide variety of situations.

What are those specific attributes? Although research on leaders and leadership in vocational education is almost nonexistent, the literature of several other fields is filled with nominations based upon theory, experience, and empirical research. In one publication

alone, Bass (1981) reviewed one hundred and twenty-four studies completed between 1904-1947 and two hundred and fifteen more between 1947-1970. Although no two studies were found to advance exactly the same set of attributes, there is a great deal of consistency among the kinds of attributes proposed. After reviewing a large number of available publications[1], the authors compiled the list of attributes shown in Table 1. The list presents the attributes they hypothesize are most likely to predispose desirable leadership behaviors.

Leadership Development

The Opportunity

Interviews with leadership trainers[2] and evaluations of leadership-development activities reported in the literature reveal that some of the attributes (characteristics, knowledge, and skills) common to successful leaders can be significantly influenced by a reasonable amount of planned education or training (Bass, 1981; Lester, 1981; Manz & Sims, 1986; Yammarino & Bass, 1988). Yukl (1981), for example, reviewed twenty-six studies that utilized control groups to evaluate training in leadership skills and managerial motivation. The criteria were specific behaviors and performance of participants. He found that the training "can be quite effective for improving managerial skills, altering leadership behavior, and strengthening managerial motivation" (p. 284).

It seems appropriate to think of "learning to lead" as a career-long developmental process; that is, attributes gained or improved at one stage prepare an individual for the next stage. Also, each relevant attribute is normally distributed in the population of vocational educators. Some limits to performance may be based upon a few very stable attributes, but education or training may improve other attributes. Therefore, the objectives of leadership-development activities should be those attributes that are susceptible to change by

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[1] Arter (1988); Bass (1981); Behling & Champion (1984); Bennis & Nanus (1985); Gardner (1987, April; June); Gough (1988); Hogan, Raskin, & Fazzini (1988); House (1988); Howard & Bray (1988); Lester (1981); Lord, DeVader, & Alliger (1986); Macoby (1981); Sashkin (1986); Sashkin & Burke (1988); Sashkin & Fulmer (1988); Schein (1985); Spencer (n.d.); Stogdill (1948, 1974); Tichy & Devanna (1986); Unger & Adams (1985); Work, Gabor, Black, Tharp, & Cuneo (1988); and Yukl (1981).

[2] Catherine Jenson, Director, Leadership Studies Program, Blandin Foundation; Lowell Hellervick, President, Personnel Decisions, Inc.; Gerald Miller, Director, Leadership Extension for Agricultural Development; Robert Terry, Director, Reflective Leadership Program, University of Minnesota; Neal Nickerson, Director, Minnesota Administrator's Academy; Jacqueline Dansberger, Institute for Educational Leadership; Fred Hayen, Director, Teacher Education Center, University of Minnesota.

Table 1

LEADER ATTRIBUTES

I. CHARACTERISTICS

A. Physical

1. Energetic with stamina

B. Intellectual

2. Intelligent with practical judgment
3. Insightful
4. Adaptable, open, flexible
5. Creative, original, visionary
6. Tolerant of ambiguity and complexity

C. Personal

7. Achievement-oriented
8. Willing to accept responsibility
9. Assertive, initiating
10. Confident, accepting of self
11. Courageous, resolute, persistent
12. Enthusiastic, optimistic
13. Tolerant of stress and frustration
14. Trustworthy, dependable, reliable
15. Venturesome, risk taker
16. Emotionally balanced

D. Ethical

17. Commitment to the common good
18. Personal integrity
19. Evidences highest values and moral standards

II. KNOWLEDGE AND SKILLS

A. Human Relations

20. Communicating with others
21. Tactful, sensitive, respectful
22. Motivating others
23. Networking

B. Management

24. Planning
25. Organizing
26. Team building
27. Coaching
28. Managing conflict
29. Managing time and organizing personal affairs
30. Managing stress
31. Using leadership styles appropriately
32. Holding ideological beliefs appropriate to the group

C. Cognitive

33. Decision-making
34. Problem-solving
35. Gathering and managing information

educational interventions, and those attributes that are resistant to change should provide a basis for selecting participants for such activities.

The Objectives of Leadership Development

The general purposes of leadership development in vocational education are, therefore, to increase the number and quality of leaders prepared to meet present and future challenges facing the field. More specifically, the Center will seek to accomplish those purposes by deliberately attempting to effect positive change in selected attributes (characteristics, knowledge, and skills) to increase the likelihood that vocational educators will (1) perceive opportunities to behave as leaders, (2) grasp those opportunities, and (3) succeed in influencing group behaviors in a wide variety of situations and professional roles.

The Means

Leadership-development experiences, like all education and training, are most effective when individuals feel the need for them and when organizations support their participation. Ideally, the need to begin leadership development will be felt relatively early in individual careers so that individuals can be prepared to grasp leadership opportunities as they arise and so that dysfunctional attributes can be changed before they result in lost or failed opportunities. The more experienced and established the individuals, the more difficult it becomes to change some kinds of attributes.

Special experiences can be created to facilitate the development of leaders. Since leadership involves interpersonal behaviors, it is best to provide group activities so that participants can benefit from interactions. Successful leadership trainers suggest that these experiences should have the improvement of selected attributes as their goal. Developmental activities should be designed that will (1) create awareness of the importance of the attribute(s), (2) permit self-assessment and diagnosis, (3) build the necessary concept(s) (using role models), and (4) provide multiple opportunities to use the attribute(s) by practicing the tasks of leaders in realistic vocational education situations. Follow-up activities such as recognition for on-the-job achievement and the utilization of networks are important reinforcements.

Most learning in the career-long developmental process, however, takes place on the job. Bass (1981) has suggested that coaching by the supervisor, planned and guided job experiences, leadership internships, job rotation, and special project assignments be used to improve the performance of leaders at work. Despite the promise of such development experiences, it seems safe to conclude that "we have barely scratched the surface in our feeble attempts toward leadership development" (Gardner, 1987b).

Leadership Development and Professional Development

Leadership development attempts to cultivate selected attributes to enhance the probability of successful performance as a leader in a wide variety of situations. These attributes are common to leadership behavior in all professional roles in vocational education; administrators should have them, teachers should have them, and counselors should have them. But in order to perform successfully as administrators or teachers, individuals need more than the common leadership attributes. They also need the knowledge and skill attributes that are unique to their given roles. These are the attributes that distinguish administrators from teachers, teachers from counselors, and counselors from administrators, and that determine whether individuals can perform the specific occupational or technical tasks of their professional roles. Leadership development is, thus, only one part of professional development. Professional development consists of cultivating both the leadership attributes *and* the attributes that facilitate successful performance in a particular professional role.

AN EMPIRICAL TEST OF THE CONCEPTUALIZATION

The Design

Objectives

In order to begin to test the utility of the foregoing conceptualization of leadership, a study was designed and conducted for the purpose of examining two major questions:

1. What is the empirical relationship between the leader attributes posited in the conceptualization and the leadership effectiveness of vocational administrators?
2. What is the factor structure of leader attributes among vocational education administrators?

Population and Sample

The population for the study consisted of all the full-time faculty employed in Minnesota's thirty-four postsecondary Technical Institutes (now Technical Colleges) as of September 1989. A sample of fifteen teachers was drawn randomly from each Technical Institute, with proportional representation for males and females. Appendix A presents the composition of the population (2106) and the sample (510).

Instrumentation

The research instrument used was the *Leadership Attributes Questionnaire (LAQ)*, especially designed for the study. The teachers in the sample were directed by the *LAQ* to think about the one vocational administrator whom they knew best—vocational director, assistant director, or adult evening director—and to rate that person on each of the thirty-five leader attributes (shown in Table 1) and on each of four criterion measures of leadership effectiveness, using a five-point itemized scale. The four criterion measures of leadership effectiveness in the *LAQ* were the same as the four broad tasks of a leader: (1) inspire a shared vision, (2) foster collaboration and ownership and recognize individual and team contributions, (3) exercise power effectively and enable others to act, and (4) act on the environment to set the right context for the organization. For half of the sample, the *LAQ* presented the leader attributes first; for the other half of the sample the leadership effectiveness items were presented first.

Before mailing the *LAQ* to the sample, it was administered twice to thirty-six doctoral students in the Department of Vocational and Technical Education at the University of Minnesota. The interval between the two administrations was two weeks. The test-retest reliability coefficients (r) for the attributes ranged from .64 to .87. The correlation coefficients (r) for leadership effectiveness items ranged from .81 to .92.

Data Collection

A package containing (1) a cover letter describing the purpose of the study; (2) the *LAQ*; (3) a self-addressed, stamped envelope; and (4) a postcard containing an identification number was sent to the sample. Respondents were directed to mail the postcard and the completed *LAQ* to different addresses. In this way, anonymity was protected, and the investigator was able to follow up on respondents.

The return rate for the initial mailing was about thirty-five percent. A revised cover letter with a second copy of the *LAQ* and a postcard was then mailed to nonrespondents. The total number of responses secured was two hundred and eighty-two, a return rate of fifty-five percent, including one hundred and ninety-two males and ninety females (Appendix B). The proportion of returns as well as the means and standard deviations of leader attributes and leadership effectiveness ratings of the first and second set of returns were compared and found to be almost identical.

Analysis and Findings

Attribute and Effectiveness Relationships

All thirty-five leader attributes (A1-A35) were significantly (.001) related to all four measures of leadership effectiveness (E1-E4). (See Appendix C.) The highest correlations, however, were obtained between the thirty-five attributes and the mean of the four measures of effectiveness (Em). Correlations with Em ranged from .56 to .82, averaging about .70.

A stepwise multiple regression was used to obtain the set of leader attributes which best explained the variance in Em. The resulting equation revealed that six of the thirty-five attributes made significant contributions to the prediction of overall leadership effectiveness ($F = 199.74$, significant at the .001 level). The multiple R was .90 (see Appendix D). The

six leader attributes were motivating others (A22); team building (A26); adaptable, open, flexible (A4); gathering and managing information (A35); willing to accept responsibility (A8); and insightful (A3).

A cross validation was carried out using the thirty-six responses obtained from the test-retest reliability sample. An R of .92 was secured (with the same six attributes), indicating the relative stability of the regression equation.

It is interesting to note that the six leader attributes which maximized the prediction of overall leadership effectiveness were drawn from four of the six different categories of attributes shown in Table 1. Only the categories of physical and ethical attributes did not contribute significantly to the prediction.

Leader Attribute Structure

A factor analysis was performed to find the minimum number of factors necessary to account for a maximum amount of variance in the thirty-five leader attributes. The rule of eigen-value - greater-than-one was applied in the selection of new factors. As a result, three factors were formed which account for 70.3% of the variance in the original thirty-five attributes. A varimax rotation was applied so that factors could be readily identified (see Appendix E). The three factors were named "social skills & characteristics," "personal characteristics," and "management skills."

A second factor analysis was carried out using only the data from "very effective" leaders; these were defined as administrators with an average leadership effectiveness rating (Em) of 4.0 or higher on the five-point scale (N=58). Eight subfactors were tentatively formed as shown in Figure 2. (Tentative because of the small sample size.) The subfactors were named as follows: organizational, cognitive, visionary, action-oriented, energetic, ethical, interpersonal, and intellectual.

It is significant that the six leader attributes which contribute most to a prediction of overall leadership effectiveness appear in six of the eight subfactors; only the energetic and ethical subfactors are not represented.

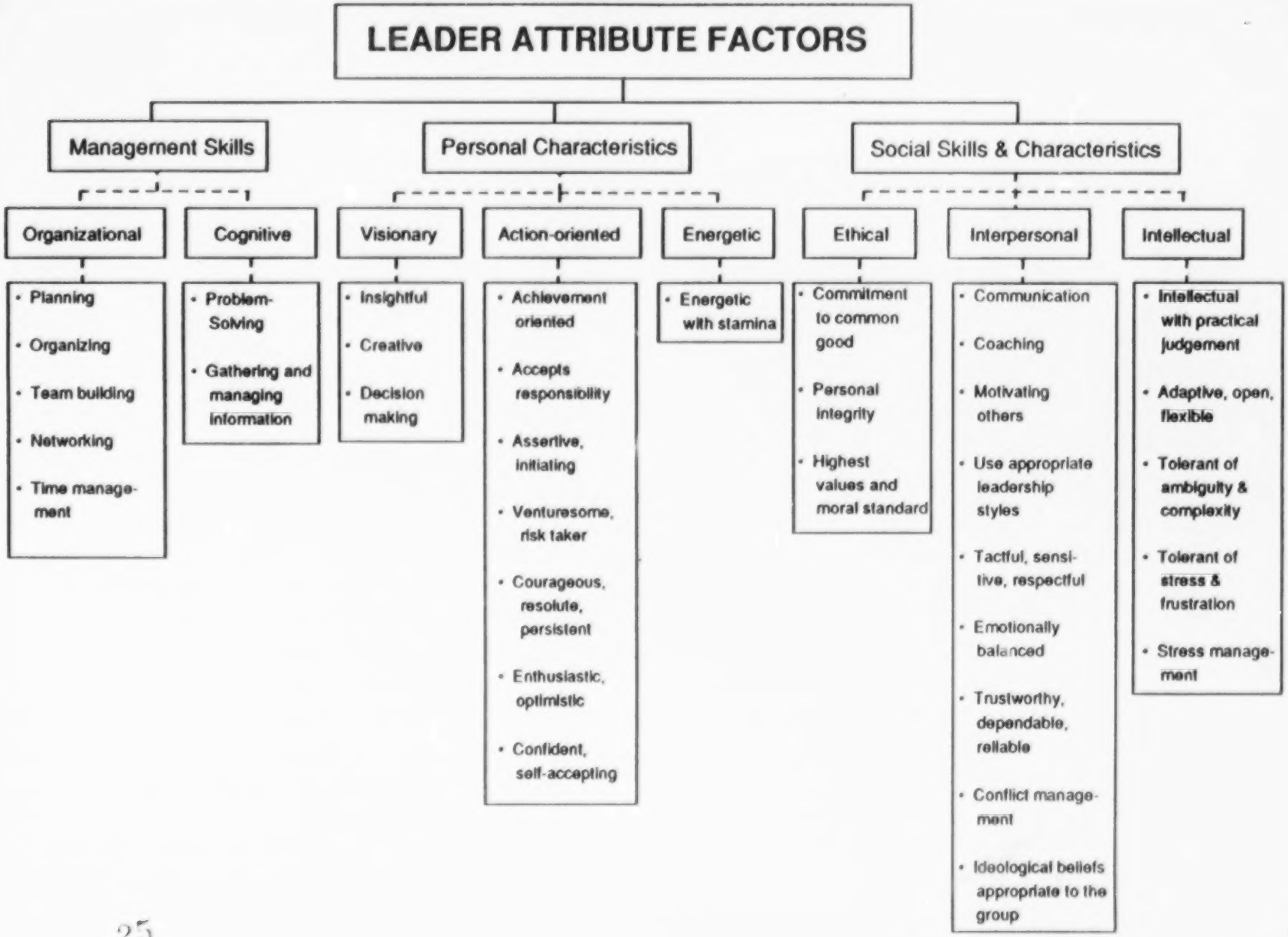
Conclusions

Although they are consistent with the conceptualization of leadership presented in an earlier section of this paper, at least three assumptions should be made explicit before the conclusions of the study are stated. First, the four criterion measures of leadership effectiveness (E1 - E4) must be acceptable. Second, an arithmetic mean of the four criterion measures (Em) is a better measure of overall effectiveness than any other combination of the four criterion (E1 - E4). Third, the *perceptions* of faculty about administrators' attributes and leadership effectiveness is the appropriate approach to assessing these variables.

Given the acceptance of the assumptions, it is possible to conclude for the respondents, first, that all thirty-five of the attributes are strongly related to perceived leadership effectiveness, and that the following six attributes are particularly useful in predicting perceived effectiveness: (1) motivating others; (2) team building; (3) adaptable, open, flexible; (4) gathering and managing information; (5) willing to accept responsibility; and (6) insightful.

Second, leader attributes can be clustered into the three main groups of social skills and characteristics, personal characteristics, and management skills. Further, there is some basis for hypothesizing that these main groups can be subdivided into the following factors: (1) organizational, (2) cognitive, (3) visionary, (4) action-oriented, (5) energetic, (6) ethical, (7) interpersonal, and (8) intellectual.

FIGURE 2


LEADER ATTRIBUTE FACTORS
Management Skills
Personal Characteristics
Social Skills & Characteristics
Organizational
Cognitive
Visionary
Action-oriented
Energetic
Ethical
Interpersonal
Intellectual
• Planning
• Organizing
• Team building
• Networking
• Time management
• Problem-Solving
• Gathering and managing information
• Insightful
• Creative
• Decision making
• Achievement oriented
• Accepts responsibility
• Assertive, initiating
• Venturesome, risk taker
• Courageous, resolute, persistent
• Enthusiastic, optimistic
• Confident, self-accepting
• Energetic with stamina
• Commitment to common good
• Personal integrity
• Highest values and moral standard
• Communication
• Coaching
• Motivating others
• Use appropriate leadership styles
• Tactful, sensitive, respectful
• Emotionally balanced
• Trustworthy, dependable, reliable
• Conflict management
• Ideological beliefs appropriate to the group
• Intellectual with practical judgement
• Adaptive, open, flexible
• Tolerant of ambiguity & complexity
• Tolerant of stress & frustration
• Stress management

SOME IMPLICATIONS FOR NEXT STEPS

The paper began with the stated purpose of providing a conceptualization of leadership and leadership development that would be maximally useful to the Center in planning its leadership-development activities and in guiding research designed to support those activities. Having created the conceptualization, and having received some empirical support for its utility, it is fitting that the paper should end by indicating some of the Center's plans for next steps in the leadership arena. Three strands of concurrent activities are envisioned: (1) research, (2) leadership-development, and (3) instrumentation.

Research

It is necessary to build assurance about the criterion measure(s) used to assess leadership effectiveness. What criteria do vocational educators actually use? Are they suitable? Are differential weightings called for? To what extent does gender, professional role, or situation affect the criteria utilized?

More studies are also needed to gain confidence in the generalizability of the relationship between the leader attributes and leadership effectiveness. The research should explore possible differences in the relationship as perceived by men and women, among persons in various professional roles, and among faculty in different kinds and levels of institutions such as secondary schools and community colleges.

The developmental character of leader attributes should be investigated. Are there stages of leadership development? As young leaders mature and assume increasing responsibilities throughout their careers, what changes occur in their behaviors and in their attributes? Are these changes similar to differences found among leaders who occupy positions at different levels in the organization? Is the growth of some attributes prerequisite to the attainment of others? What job and organizational characteristics facilitate leadership development?

Leadership Development

While it would be desirable to conduct further research on the utility of the conceptualization before proceeding with leadership-development activities, the legislative mandate of the Center and the transitional status of the field preclude that luxury. Consequently, leadership-development activities are being planned based upon the presumption of strong relationships between the leader attributes and leadership effectiveness. As stated in an earlier section of the paper, the goal of these activities is to increase the number and quality of leaders prepared to meet present and future challenges facing vocational education. The specific objectives are to effect change in selected attributes that increase the likelihood of vocational educators perceiving opportunities to behave as leaders, grasping those opportunities, and succeeding as leaders in a wide variety of situations and professional roles.

Toward these ends, the Center will begin by conducting a conference for teacher educators in graduate programs of vocational education. The intent of this "train the trainer" approach is to stimulate and facilitate the conduct of leadership-development activities in institutions of higher education. The conference will provide information about such topics as leadership concepts and model instructional activities and materials that improve selected attributes. Following the conference, a "Request for Proposal" (RFP) will be sent by the Center to all vocational teacher education departments offering graduate programs inviting proposals to design and conduct leadership-development activities for their graduate students. The Center will subsidize selected activities. Then, the Center's role will become that of evaluator, assessing the relative effectiveness and efficiency of the various models tried out at institutions. Finally, the Center will disseminate the results of the evaluations so that interest in and the quality of leadership-development activities across the nation can be strengthened.

The premise of the conference and the RFP is that graduate students, especially doctoral students, are a fertile source of future leaders and that not enough is now being done to develop their leadership potential. [A telephone survey by the Center revealed that only infrequently does the professional development of graduate students include a leadership component.] And, looking to the future, the institutions that begin to build faculty expertise in leadership development might also be used to deliver workshops to vocational educators in their geographic regions as a part of inservice activities. Finally,

the current Congressional legislative activity may result in a window of opportunity to magnify the impact this effort could have on vocational education. Both the House and the Senate bills to reauthorize and amend the Carl D. Perkins Vocational Education Act call for funding to support full-time graduate students in approved doctoral degree granting institutions for as long as three years. If the final reauthorizing legislation contains this provision, the potential pay-off for the Center to work with vocational graduate degree granting institutions will become even greater.

In the longer term, the Center should also work with current leaders in the field. What is presently envisioned is a service to (1) assess existing attributes, (2) identify the attributes that might be strengthened, and (3) recommend appropriate leadership-development activities. Some of these activities might be modeled by the Center.

Instrumentation

Evaluating leadership-development activities and programs, as well as assessing the leader attributes of individuals, presumes a measurement capability. Consequently, the Center is now in the process of refining the *LAQ (Leader Attribute Questionnaire)* and determining the conditions under which it will yield information with improved reliability and precision. Self-report and report-by-other formats are being tried out with naive and experienced groups and with various scales. It is likely that, in the future, norms will be established so individuals can compare their standing on leader attributes with that of known groups.

SUMMARY

This paper has provided a conceptualization of leadership and some implications for leadership development that will be useful to the National Center for Research in Vocational Education in planning its leadership-development activities and in guiding supportive research and development projects.

First, the paper confirms the importance of leadership development in vocational education on grounds that there is a consensus among practitioners that the field now lacks an adequate number of leaders and is making almost no systematic effort to develop them.

Second, a definition of leadership and a description of the leader's role is presented. Leadership is seen as both a process and a property. As a *process*, "leadership is the use of noncoercive influence to direct and coordinate the activities of the members of an organized group toward accomplishment of some objectives" (Jago, 1982, p. 315). As a *property*, leadership is ascribed to an individual by members of the group when they perceive the individual to possess certain attributes (characteristics, knowledge, and skills). Leadership, therefore, is conferred voluntarily by the group and carries with it the power of influence. Any individual can demonstrate behaviors consistent with the process of leadership and be considered a leader by the rest of the group regardless of the position (s)he holds in the organizational hierarchy.

The leader's role in an organization is posited as the accomplishment of four broad tasks: (1) inspire a shared vision, (2) foster collaboration and ownership, (3) exercise power effectively and enable others to act, and (4) set the right (external) context for the organization.

Third, the conceptualization advances the proposition that leadership behaviors result from the interaction of (1) the leader's attributes, (2) the group's attributes, (3) the task at hand, and (4) the general context. The behavior of the leader is then interpreted by the group (followers) in light of its perception of the leader's attributes, the task at hand, and the general context. The group then behaves within the constraints of its own attributes.

Leaders' attributes—characteristics, knowledge, and skills—guide and constrain their behaviors in a wide variety of situations. Thus, "although the nature of the task demands may limit transferability, there is a tendency for the leader in one group to emerge in this capacity in other groups" (Bass, 1981, p. 596). The paper then presents a list of attributes that are hypothesized to predispose desirable leadership behaviors.

Fourth, the paper points out that some leadership attributes can be developed through deliberate educational interventions. The specific ends proposed for leadership development are to effect change in selected attributes that increase the likelihood of vocational educators perceiving opportunities to behave as leaders, grasping those opportunities, and succeeding as leaders in a wide variety of situations and professional roles.

Fifth, leadership development is considered to be one part of professional development, which consists of providing the occupational or technical competencies needed to perform specialized roles as well as cultivating leadership attributes.

Sixth, a study designed to begin to test the utility of the foregoing conceptualization of leadership was conducted and the results are reported. It is clear, given the validity of the assumptions which undergird the study, that there is a strong empirical relationship between each of the specific leader attributes posited in the conceptualization and the leadership effectiveness of vocational administrators as perceived by the teachers who work with them. Six of the attributes can explain eighty-one percent of the variation in perceived leadership effectiveness. Further, a factor analysis of the data reveals that the attributes can probably be organized into three logical groups with eight subfactors.

Seventh, and finally, the paper examines some implications for the Center's next steps in research and in leadership development. More studies are required to gain confidence in the generalizability of the relationship between leader attributes and effective leadership performance. The acceptability among vocational educators of the criteria used to assess leadership effectiveness should be examined, the developmental character of leader attributes invites exploration, and an instrument to measure leader attributes needs to be developed and normed.

However, as these research activities are undertaken, the Center must also begin to provide leadership-development services to the field. Consequently, steps are now being taken to stimulate and facilitate the conduct of leadership-development activities in institutions of higher education for graduate students in vocational education. A conference for vocational teacher educators will be held and funds will be made available to help support a number of promising leadership-development projects. Both the legislative mandate of the Center and the urgent need for improving the preparation of leaders in vocational education demand that these kinds of services be initiated promptly.

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APPENDIX A

NUMBER OF VOCATIONAL FACULTY BY INSTITUTION AND GENDER IN THE POPULATION AND THE SAMPLE

Name of Technical Institute	Male	Female	Total
1. Albert Lea	31(11)	12(4)	43(15)
2. Alexandria	58(11)	20(4)	78(15)
3. Anoka	58(10)	31(5)	89(15)
4. Austin	32(9)	22(6)	54(15)
5. Bemidji	26(9)	17(6)	43(15)
6. Brainerd	23(10)	10(5)	33(15)
7. Canby	25(13)	5(2)	30(15)
8. Dakota	72(11)	29(4)	101(15)
9. Detroit Lakes	37(12)	10(3)	47(15)
10. Duluth	53(9)	31(6)	84(15)
11. East Grand Forks	21(7)	24(8)	45(15)
12. Eveleth	16(12)	4(3)	20(15)
13. Faribault	24(10)	13(5)	37(15)
14. Granite Falls	20(10)	11(5)	31(15)
15. Hibbing	32(13)	6(2)	38(15)
16. Hutchinson	33(10)	16(5)	49(15)
17. Jackson	32(11)	10(4)	42(15)
18. Mankato	66(10)	31(5)	97(15)
19. Minneapolis	79(8)	60(7)	139(15)
20. Moorhead	19(10)	10(5)	29(15)
21. Northeast Metro	68(10)	38(5)	106(15)
22. Pine City	16(10)	8(5)	24(15)
23. Pipestone	28(12)	7(3)	35(15)
24. Redwing	22(9)	13(6)	35(15)
25. Rochester	28(6)	39(9)	67(15)
26. St.Cloud	63(11)	23(4)	86(15)
27. St.Paul	109(11)	37(4)	146(15)
28. Staples	43(13)	6(2)	49(15)
29. Suburban Hennepin	160(22)	54(8)	214(30)
30. Thief River Falls	29(11)	12(4)	41(15)
31. Wadena	34(12)	9(3)	43(15)
32. Willmar	80(10)	39(5)	119(15)
33. Winona	21(11)	7(4)	28(15)
Total	1450(354)	656(156)	2106(510)

Note. 1. Numbers in parentheses represents the sample size in each category.
2. Suburban Hennepin includes two campuses, North and South.

APPENDIX B

SAMPLE SIZE AND RESPONDENTS BY TECHNICAL INSTITUTE AND GENDER

Name of Technical Institute	Male	Female	Total
1. Albert Lea	11(5)	4(3)	15(8)
2. Alexandria	11(2)	4(2)	15(4)
3. Anoka	10(8)	5(1)	15(9)
4. Austin	9(4)	6(2)	15(6)
5. Bemidji	9(7)	6(4)	15(11)
6. Brainerd	10(5)	5(4)	15(9)
7. Canby	13(5)	2(2)	15(7)
8. Dakota	11(6)	4(2)	15(8)
9. Detroit Lakes	12(7)	3(3)	15(10)
10. Duluth	9(5)	6(4)	15(9)
11. East Grand Forks	7(5)	8(3)	15(8)
12. Eveleth	12(8)	3(3)	15(11)
13. Faribault	10(5)	5(4)	15(9)
14. Granite Falls	10(4)	5(2)	15(6)
15. Hibbing	13(5)	2(1)	15(6)
16. Hutchinson	10(3)	5(2)	15(5)
17. Jackson	11(5)	4(2)	15(7)
18. Mankato	10(6)	5(3)	15(9)
19. Minneapolis	8(4)	7(4)	15(8)
20. Moorhead	10(7)	5(1)	15(8)
21. Northeast Metro	10(5)	5(2)	15(7)
22. Pine City	10(3)	5(4)	15(7)
23. Pipestone	12(5)	3(1)	15(6)
24. Redwing	9(8)	6(3)	15(11)
25. Rochester	6(5)	9(5)	15(10)
26. St.Cloud	11(7)	4(2)	15(9)
27. St.Paul	11(3)	4(4)	15(7)
28. Staples	13(9)	2(1)	15(10)
29. Suburban Hennepin	22(13)	8(7)	30(20)
30. Thief River Falls	11(7)	4(1)	15(8)
31. Wadena	12(8)	3(1)	15(9)
32. Willmar	10(7)	5(5)	15(12)
33. Winona	11(6)	4(2)	15(8)
Total	354(192)	156(90)	510(282)
% of Returned LAQ's	54.2 %	57.7 %	55.3 %

Note. 1. Numbers in parentheses represent the usable responses in each category.
2. Suburban Hennepin includes two campuses, North and South.

APPENDIX C

PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS (r)
AMONG LEADERSHIP EFFECTIVENESS (E) AND
LEADER ATTRIBUTES (A)
(N = 282)

	E1	E2	E3	E4	Em
A1	.58 ***	.59 ***	.60 ***	.61 ***	.63 ***
A2	.70 ***	.66 ***	.66 ***	.68 ***	.72 ***
A3	.73 ***	.71 ***	.73 ***	.73 ***	.77 ***
A4	.71 ***	.70 ***	.68 ***	.67 ***	.74 ***
A5	.69 ***	.64 ***	.67 ***	.67 ***	.71 ***
A6	.53 ***	.58 ***	.56 ***	.55 ***	.59 ***
A7	.62 ***	.63 ***	.65 ***	.64 ***	.68 ***
A8	.66 ***	.65 ***	.73 ***	.69 ***	.72 ***
A9	.59 ***	.53 ***	.67 ***	.62 ***	.64 ***
A10	.62 ***	.58 ***	.62 ***	.63 ***	.65 ***
A11	.67 ***	.61 ***	.65 ***	.67 ***	.69 ***
A12	.61 ***	.62 ***	.62 ***	.65 ***	.66 ***
A13	.54 ***	.57 ***	.53 ***	.51 ***	.57 ***
A14	.68 ***	.68 ***	.69 ***	.68 ***	.73 ***
A15	.57 ***	.50 ***	.53 ***	.54 ***	.56 ***
A16	.61 ***	.63 ***	.61 ***	.63 ***	.66 ***
A17	.66 ***	.64 ***	.62 ***	.66 ***	.79 ***

*** Significant at .001 level.

(CONTINUED)

	E1	E2	E3	E4	Em
A18	.64 ***	.65 ***	.63 ***	.64 ***	.68 ***
A19	.61 ***	.61 ***	.57 ***	.58 ***	.64 ***
A20	.68 ***	.69 ***	.69 ***	.68 ***	.73 ***
A21	.65 ***	.68 ***	.64 ***	.64 ***	.70 ***
A22	.79 ***	.75 ***	.77 ***	.77 ***	.82 ***
A23	.71 ***	.68 ***	.71 ***	.69 ***	.74 ***
A24	.62 ***	.58 ***	.66 ***	.63 ***	.66 ***
A25	.62 ***	.60 ***	.66 ***	.65 ***	.67 ***
A26	.78 ***	.75 ***	.77 ***	.76 ***	.81 ***
A27	.73 ***	.73 ***	.75 ***	.74 ***	.79 ***
A28	.70 ***	.67 ***	.70 ***	.70 ***	.73 ***
A29	.63 ***	.59 ***	.62 ***	.62 ***	.65 ***
A30	.57 ***	.59 ***	.62 ***	.58 ***	.63 ***
A31	.75 ***	.73 ***	.77 ***	.76 ***	.80 ***
A32	.71 ***	.69 ***	.70 ***	.71 ***	.75 ***
A33	.67 ***	.65 ***	.73 ***	.69 ***	.73 ***
A34	.69 ***	.70 ***	.73 ***	.72 ***	.76 ***
A35	.67 ***	.66 ***	.69 ***	.69 ***	.73 ***

*** Significant at .001 level.

APPENDIX D

ANALYSIS OF VARIANCE AND REGRESSION EQUATION FOR LEADERSHIP EFFECTIVENESS (DEPENDENT VARIABLE) WITH LEADER ATTRIBUTES (INDEPENDENT VARIABLES)

SOURCES	DF	SUM OF SQUARE	MEAN SQUARE	F
REGRESSION	6	294.67	49.11	199.74 ***
RESIDUAL	275	67.62	0.246	
TOTAL	281	362.29		

REGRESSION EQUATION

Y= -0.31 + 0.21 X22 + 0.24 X26 + 0.22 X4 + 0.12 X35 + 0.12 X8 + 0.13 X3

MULTIPLE R	0.90
R SQUARE	0.81
STANDARD ERROR	0.50

Note. Selection of independent variables by stepwise method at pin=.01 and pout=.05 level

Y= leadership effectiveness, X22= motivating others (A22), X26= team building (A26), X4= adaptable, open, flexible (A4), X35= gathering & managing information (A35), X8= willing to accept responsibility (A8), X3= insightful (A3)

*** Significant at .001 level

APPENDIX E

CORRELATIONS BETWEEN ROTATED FACTORS AND THE THIRTY-FIVE LEADER ATTRIBUTES
(N = 282)

Variable	Factor 1	Factor 2	Factor 3
A21	.826	.204	.211
A18	.765	.232	.303
A17	.763	.307	.201
A19	.745	.197	.323
A14	.733	.309	.332
A16	.729	.295	.276
A4	.728	.409	.159
A13	.699	.275	.150
A20	.696	.370	.261
A32	.623	.360	.437
A31	.614	.420	.454
A30	.608	.274	.412
A2	.601	.357	.458
A6	.591	.251	.295
A22	.577	.552	.338
A27	.535	.485	.426
A28	.501	.403	.499
A9	.179	.776	.327
A15	.152	.748	.246
A10	.322	.724	.217
A11	.320	.703	.326
A5	.378	.680	.315
A7	.332	.680	.349
A12	.458	.675	.142
A1	.369	.651	.211
A33	.296	.604	.554
A8	.441	.567	.371
A3	.484	.504	.461
A25	.258	.378	.790
A24	.311	.379	.756
A29	.478	.199	.659
A34	.391	.497	.609
A35	.336	.478	.599
A26	.502	.498	.520
A23	.451	.434	.510

Note. Rotation was varimax.